

## REMARKS

The Office Action dated March 25, 2004 has been received and carefully reviewed. The preceding amendments and the following remarks form a full and complete response thereto. Claims 1 is amended. No new matter is added. Claims 6-10 are withdrawn. Accordingly, claims 1-5 and 11 are pending in this application and submitted for reconsideration.

An objection was made to the declaration on the basis that one of the inventors marked up the address with ink without initialing and dating the corrections. The markings were made on or before the inventor signed the declaration, and therefore a new declaration is not required under 37 C.R.F. §1.52(c). Rule 52(c) requires that markings be initialed and dated or signed by the Applicant. Here, Mr. Rigler did sign the document in question and complied with rule 52(c). Accordingly, Applicants request that the objection be withdrawn.

An objection was made to the specification because of an apparent misspelling. The specification was amended herein to correct the misspelling. Accordingly, Applicants request that the objection be withdrawn.

Claims 1-3 were rejected under 35 U.S.C. § 112, first paragraph on enablement grounds. In particular, the Examiner has proposed a scenario which he believes is covered by the claims and which is not enabled by the specification. Applicants traverse the rejection. Claim 1 was amended to recite a method to distinguish, whether an event sequence on a molecular level is a memory driven event sequence, which is clearly enabled by the current specification. Accordingly, Applicants request that the

rejection be withdrawn.

Claims 1 and 2 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,078,872 to Carson et al. ("Carson"). Claim 3 was rejected under 35 U.S.C. § 103(a) as being obvious over Carson in view of an article by Dhingra et al. ("Dhingra"). Claims 4-5 and 11 were rejected under 35 U.S.C. § 103(a) as being obvious over Carson in view of an article by Qian. Applicants traverse the rejections.

Carson does not teach a step of determining whether an event has memory or not, and therefore cannot anticipate claim 1 of the present invention and the rejection is improper. Carson sets the second order autocorrelation function equal to the product of the first order autocorrelation functions and then controls the measurements such that the events being measured have memory. According to Carson, the second order autocorrelation function as defined by the product of two first order autocorrelation functions suppresses the effects of noise in the initial condition of a target system capable of retaining memory. See column 2, lines 39-49. Carson defines the second order autocorrelation to suppress noise. Fourier transforms are used to optimize the suppression of noise. See column 5, lines 35-43. At column 12, lines 14-20 of Carson, it is stated that instrument noise need not be correlated with either the signal, the initial-condition noise or the system, or even with itself from one measurement to the next. Carson does not suggest that non-memory functions cannot be expressed as a second order autocorrelation function equal to the product of two first order autocorrelation functions. Carson merely teaches that when measuring systems having memory, the signal-to-noise ratio can be increased by using such a second order autocorrelation

function. Thus, Carson fails to teach or suggest the features of claim 1, upon which claims 2-5 and 11 depend. Further, Applicants submit that any assertion that Carson does suggest such a feature requires impermissible hindsight.

Neither Dhingra or Qian cure the above-described deficiencies in Carson. Accordingly, Applicants request that the rejections to claims 1-5 and 11 be withdrawn.

In view of the above amendments and remarks, it is believed that the claims satisfy the requirements of the patent statutes and fully address the Examiner's concerns as set forth in the Office Action. Reconsideration of the instant application and early notice of allowance therefore are requested. The Examiner is invited to telephone the undersigned if it is deemed to expedite allowance of the application.

No Fee is believed due in connection with the filing of this Amendment. If, however, any fee is required, authorization is hereby given to charge such fee to Deposit Account No. 02-2135.

Respectfully submitted,

By:



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